MISSION-PULL and Long-Range Planning

By CLARK A. MURDOCK

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
1995		**00-00-1994 to 00-00-1995**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Mission-Pull and Long-Range Planning	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **National Defense University,Institute for National Strategic Studies,Fort Lesley J. McNair,Washington,DC,20319**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**Same as Report (SAR)**	**8**	

Vehicles on board LCACs during Agile Provider '94.
Navy Combat Camera (Alexander Hicks)

Throughout the Cold War, the Soviet threat drove long-range planning—indeed, it drove all planning—in the defense community. In essence, we projected the Soviet threat and matched it or developed competitive strategies to counter it. It is hardly an overstatement to claim that we did not plan for, but rather programmed against, a projected threat. Since the Soviet Union invested steadily in its military machine, the pace of U.S. military innovation was fueled by threat-based obsolescence—new weapons were introduced into the force because the old ones were deemed to be incapable of coping with new Soviet weaponry.

With that threat as the fulcrum, scenarios became the dominant form of defense planning.[1] Geopolitical scenarios were used to test strategies for containing Soviet-led communism, and war gaming provided the means for structuring U.S. and allied forces. Given relative certainty in terms of who constituted the threat and the context in which the Armed Forces were expected to operate, geopolitical assumptions in scenarios were generally taken as reasonable expectations. This Cold War consensus, of course, underlay the utility of scenario-based planning as a credible means of examining and justifying force structure and projected defense programs.

Summary

With the demise of a monolithic threat, planners might do well to discard their scenario-based tools that are geared to identifying specific military requirements. What they need is a flexible method of long-range defense planning against generic threats. To be farsighted planners should focus on missions likely to arise 18 to 20 years from now. Given that acquisition decisions made today will result in fielding weapon systems which can endure for forty years and that the mindsets of the leaders of 2010 have already been shaped, it is time to apply the mission-pull approach developed by the Office of the Secretary of Defense. Partially used by the Joint Requirements Oversight Council and the Commission on the Roles and Missions of the Armed Forces, this new approach offers an analytic tool that is especially suited to the defense budgeting process.

In the post-Cold War world the case for scenario-based planning is far less convincing. In thinking about the future security environment, unknowns predominate:

- What role will the United States play?
- What are the threats?
- Who will have the capabilities and the will to challenge our interests?
- How much of the budget will be dedicated to defense?

Given the scope of such uncertainties, it is hardly surprising that senior decisionmakers are finding scenario-based planning a less than credible device for sizing and shaping future forces.[2] The need for long-range planning has increased even as the uncertainties of the post-Cold War era make our ability to conduct it more difficult. As the world's preeminent military power, we no longer have a single threat to drive innovation. Bureaucratic momentum alone will lead us to retain capabilities that won the last war. Declining budgets and reduced force structures—coupled with the increased tempo of peacetime commitments—will only reinforce the preoccupation with current problems to the exclusion of preparing for tomorrow's conflict. Decisions which affect the future of the Armed Forces then will be based upon near-term considerations, increasing the risk that we will possess the wrong capabilities for the battlefield of the 21st century.

we no longer have a single threat to drive innovation

A New Approach

Despite uncertainty over *where* and *when* or against *whom* we might use force, we still can think about *how* it might be used. During the mid-1970s the United States could not anticipate the 1991 war with Iraq; but based on analyses of the Vietnam conflict and the Arab-Israeli war of 1973 we perceived the need to penetrate heavy, integrated air defenses. This resulted in what Secretary of Defense William Perry called "offset strategy," which emphasized among other things stealthy aircraft and suppression of enemy air defense (SEAD).[3] We need to institutionalize this kind of thinking about long-term needs. Instead of focusing on where or when force may be used, which is what scenarios tend to do, we should determine what capabilities are needed to cope with generic contingencies. The key is to authoritatively identify the future missions of the Armed Forces.

How far ahead should we look? Choosing an appropriate timeframe is critical. It should reach far enough into the future that if we want a new class of capabilities there is enough time to acquire it. But it also must be close enough that if we do want new capabilities, we can start to take action. This is relevant planning. If the planning process is not connected to resource decisions it is merely an academic exercise.

Without threat-based obsolescence, age and sustainability are likely to determine a weapon system's life expectancy. Decisions made under the current Five-Year Defense Plan (FYDP) will be far-reaching, because today's systems may remain in service over forty years. For example, the F–111 aircraft is still projected to be in service well into the 21st century, fifty years after the tactical fighter experimental (TFX) program began; many M1A2 tanks in service during the second decade of the 21st century will be thirty years old; and the average Spruance-class destroyer in 2015 will be over thirty-five years old. This trend is so pervasive in post-Cold War planning that an analysis by the Office of the Secretary of Defense (OSD) indicates that only about one-quarter of the major systems deployed in 2011 will have been programmed after the five-year plan for FY94–FY99.[4]

Moreover, this trend will be true for people, too. In large part, the perceptions and skills of those who will lead the military of 2010 have already been set. For instance, the class of 1994 will be squadron, battalion, and ship commanders in 2014; the individual who is Chairman of the Joint Chiefs of Staff will have entered the force around 1980; and fully one-third of the officers of 2010 will have been commissioned before or during the current FYDP. Decisions made in one FYDP, if executed as planned, will largely determine capabilities for at least two additional FYDP periods. The current five-year plan, however, only projects programs, forces, and budgets out six years, to the end of this century. Clearly, greater attention

Clark A. Murdock is Special Assistant to the Under Secretary of the Air Force. He previously served as Deputy to the Under Secretary of Defense for Policy Planning and also has worked as a congressional staffer, intelligence analyst, and educator.

E–2 Hawkeye on *USS America* during Deny Flight.

Combat Camera Imagery (Raymond T. Conway)

F–117 stealth fighter.

DOD

should be given to the period 18 to 20 years out, since decisions today will determine almost 75 percent of the force structure in 2010–15. Therefore the timeframe selected for the OSD analysis was 2011 since it was exactly three FYDPs (18 years) away from the starting point of our long-range planning effort in June 1993.

Mission-Pull

The key to effective planning at a time of declining resources and uncertainty about threats and strategies is to think long range—particularly regarding missions. What decisionmakers need, therefore, is a means to develop a common understanding of future missions and then to apply this understanding to decisions made today. The mission-pull approach began with a survey of work by futurologists and long-range planners to identify probable operating environments in which the Armed Forces could be employed in 2011.[5] As indicated in the accompanying figure, the favorites of many futurologists—for example, a new Soviet Union or cyberwar—are more likely to emerge in the second decade of the 21st century, not by 2011. It would take time and effort to weaponize new technology and overcome current U.S. military advantages, especially in light of the fact that we are now spending more on defense than the next eight highest spending countries combined. Each operating environment was defined according to three factors:

- *future threat environments*—specific operational contexts broadly encompassing a range of enemy capabilities—conventional and, when appropriate, weapons of mass destruction (WMD)—and conditions imposed by the physical environment
- *future missions*—future operational objectives to be accomplished by military forces
- *critical tasks*—key activities necessary to successfully execute a future mission.[6]

Assessing the relative difficulty of performing missions and associated critical tasks is vital to mission-pull since it is the principal means of determining the ultimate effectiveness of proposed capabilities. In an era of declining resources it is not enough simply to avoid acquiring redundant or unnecessary capabilities; we also cannot afford to buy ineffective capabilities, that is, capabilities that cannot accomplish the critical tasks needed to achieve future missions.

The Process Counts

The mission-pull approach provides an analytic tool for rigorously defining future military missions. In sum, it disaggregates

M1A1 Abrams main battle tank.

Military Photography (Greg Stewart)

U.S. Navy (Petty)

Spruance class destroyer *USS Hewitt*.

the 2011 security environment into 12 operating environments, over 60 military missions, and over 200 critical tasks.[7] Although the analytic effort in creating our mission grids is instructive—if only to clarify how future conflicts are likely to be fought—the key to making mission-pull an effective tool is to incorporate it in the policymaking process. Decisions about capabilities are made in many circles in the Pentagon, of which the Defense Review Board, Defense Acquisition Board, and Joint Requirements Oversight Council are the most authoritative. While competing proposals should be judged on their ability to accomplish the mission, neglecting to define the mission will result in proponents of a given proposal shaping the mission to fit it.

from a planning perspective, there is no consensus on the American role in the post-Cold War world

During the Cold War the ubiquitous Soviet threat provided some discipline to the process, though the form of that threat projection often masked a struggle between competing force structure or weapons system proposals. From a planning perspective, there is no consensus on the American role in the post-Cold War world, nor on that which the Armed Forces should play in support of yet undefined national security interests. Just as after World War II, this will take years to develop.

What defense planners can do, however, is to suboptimize by building a consensus around missions so that a future President can have effective options for dealing with security challenges in 2011. This is a point that bears repeating in a slightly different way—a lack of foresight today will limit the strategic alternatives of a future President. If the uncertainty of the post-Cold War era makes it difficult to predict what our 2011 national security strategy will be, our near-term task should be to preserve future military options by making decisions to acquire or retain effective capabilities to execute the missions of tomorrow, not those of today or yesterday.

Operating Environments of 2011

Type	Description
economic warfare	military operations in support of or defending against economic war
Restore Comfort	humanitarian aid in ethnic conflict or rogue states
counterterrorism	offensive and defensive operations against terrorism
Just Cause	replacement of illegitimate foreign regime
peoples war	rural-based insurgency
Sarajevo	urban guerrilla warfare
Yongbyon	military operations against WMD facility
Tel Aviv	regional defense in WMD environment
Taiwan Straits	"blue water" conflict to deter invasion of third country
Strait of Hormuz	littoral warfare
MRC	major regional conflict in WMD environment
homeland defense	defense of CONUS against full threat spectrum

Authoritatively defining future missions is not a trivial pursuit, because the stakes for both the services and defense agencies are high. In a sense DOD would be trying to build a consensus on a yardstick that measured competing proposals for requirements. A Defense Futures Working Group, chartered by the senior leadership—the Secretary and Deputy Secretary of Defense and the Chairman and Vice Chairman of the Joint Chiefs of Staff—and comprised of OSD, Joint Staff, and service planners, would develop and coordinate a set of mission grids which operationally define the security environment of 2011. The resulting product would be approved definitions of future missions, including critical tasks to be accomplished for mission success; this would constitute a common future-oriented framework for decisionmakers.

capabilities must be defined in terms of accomplishing missions

Underlying a host of unresolved post-Cold War debates about the future has been the lack of formal consensus on capabilities. The mission-pull approach provides a basis for planners and decisionmakers to think long-range about missions and, ultimately, future capabilities; but the true added value of developing definitions of missions can be identified in discrete terms. First, clearly defined missions are goals that the services can use to direct long-range planning. This would replace a situation in which each service shapes long-range planning to coincide with its self-defined identity (such as the maritime role of the Navy or the expeditionary role of the Marines). Second, an approved list of missions could guide technological investments as declining resources limit possible technological applications. For at least the next twenty years this approach can drive the majority of technological innovations.[8] Third, future missions are starting points for defining roles and missions. Since missions provide a joint, integrated, long-range vision for the services, they can serve as the basis for competition.

Roles and Missions

Most would agree that roles should be assigned on the basis of future missions rather than on those of the Cold War. The first obstacle is semantic. The terms *roles*, *functions*, and *missions* each have specific meanings as discussions in these pages have indicated.[9] But the term *mission* is widely used to suggest more than a CINC's mission. The mission-pull approach, for instance, uses it more familiarly in references to operational objectives to be achieved sometime hence. The consequence is that the debate over roles and missions often does not focus on the central issue, a tenet of mission-pull: that roles, functions, and missions cannot be appreciated without grasping what tomorrow's operational missions are likely to be. The corollary is that once missions are identified the capabilities needed to perform them must be acquired while unnecessary or redundant capabilities are discarded. Capabilities must be defined in terms of accomplishing missions.

Selecting capability areas, then, is the next step in applying the mission-pull approach to an analysis of roles and missions. Each area should reflect projected capabilities needed to carry out the missions of 2011. Defining areas on the basis of future missions with associated critical tasks will provide a way of determining whether currently programmed forces can perform the missions and whether forces that may later be available can perform them. This approach highlights an oft-neglected aspect of the roles and missions debate, namely, that it is not enough to avoid buying redundant or unnecessary capabilities; we must also, as stated earlier, avoid ineffective capabilities.

Illustration of Capability Area: Forcible Entry

Selected Mission Area: Insertion of Forces

Critical Tasks (highest rating)

Tasks that will exist	Difficult tasks requiring significant attention for mission accomplishment	Highly demanding tasks creating major problems for mission accomplishment
collect, analyze, and disseminate intelligence	destroy heavy weapons	clear very shallow water and surface mines
protect support ships	gain and maintain air superiority	acquire/neutralize intermingled targets
conduct show of force or demonstration	capture/secure entry and exit points	internal defense/guerrillas
isolate borders and lines of communication	attack/destroy ground forces	provide ballistic missile defense
identify access and egress routes	prevent external interference	secure airfields/ports/roads and logistic sites
maintain surveillance of remote access and egress routes	detain prisoners of war	find and clear land mines
track/escort incoming vehicles	find and defeat armor	conduct ground reconnaissance
	defend against cruise missiles and precision guided munitions	find and neutralize C^3
	attain information supremacy	locate all critical facilities/materials
	provide fire support for forces ashore	coordinate air/land/sea interdiction
	reach strategic value targets	destroy hostile weapons of mass destruction launchers
	maintain interoperability with allied forces	defeat satellite surveillance
	interdict enemy supply	detect and defend against biological and chemical weapons
	identify in-country destination	defeat shore gun batteries
		locate supply caches

We used four criteria in defining capability areas: collectively, they must be *comprehensive* (theoretically offer capabilities to perform a range of missions), *comparable* (have similar levels of aggregation), *distinct* (represent qualitatively different aspects of a force and minimize the overlap between areas), and *unconstrained* (disregard fiscal or technological limits). Previous studies also were reviewed.[10] It was determined that some force qualities previously designated as functional areas—especially readiness and command and control—were common to all areas and should be treated as inherent to them. Ten tentative areas were selected which represented a broad set of capabilities that taken together define the qualities needed by the Armed Forces of 2011:

- deep strike
- nuclear strike
- land combat
- force projection and sustainment
- air combat
- space operations
- sea combat
- information operations
- forcible entry
- missile and WMD defense.

These areas, however, represented only the first step in providing a framework in which to aggregate over sixty missions and two hundred critical tasks identified in twelve future operating environments. Each area had to be divided into mission areas or groups which together represent a key component of the capability. Only then was it found that the level of aggregation allowed for both a manageable and meaningful analysis of capabilities across future operating environments.

One example of this process is the capability area of forcible entry. Analysis derived four areas: force deployment, insertion of forces, conduct of offensive operations, and transition to next phase. Of the four mission areas, insertion of forces was used to illustrate the process. Once this area was selected, we surveyed matrices developed for each of the future operating environments to select those missions which relate to inserting forces. The related critical tasks for

each mission, with associated ratings on the level of difficulty, also were selected. The tasks then were organized by the assigned degree of difficulty.

Similar assessments of all mission areas of each capability area would provide a complete, in-depth analysis of the capabilities which the Armed Forces of 2011 will require. Such a rigorous analysis is necessary to address the tough roles and missions decisions which face defense officials today. The assessments might answer vital questions such as: are we investing in capabilities that are effective or ineffective, complementary or redundant, necessary or irrelevant? The answers, in turn, could be used to address questions on whether the services can provide effective capabilities for future missions. Most importantly, the mission-pull approach offers a rigorous method for the services and defense agencies in their competition for roles and functions on the basis of the ability to execute operational missions effectively. JFQ

NOTES

[1] The varied roles of scenario-based planning in developing a common perspective among key decisionmakers—inside and outside government—is well rehearsed elsewhere. For example, see Peter Schwartz, *The Art of the Long View: Planning for the Future in an Uncertain World* (New York: Doubleday Currency, 1991); Perry M. Smith et al., *Creating Strategic Vision: Long-Range Planning for National Security* (Washington: National Defense University Press, 1987); Charles W. Taylor, *Alternative World Scenarios for a New Order of Nations* (Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, 1993); James E. Dewar and Morlie Levin, *Assumption-Based Planning for Army 21* (Santa Monica, Calif.: The RAND Corporation, 1992); James A. Dewar et al., *Assumption-Based Planning: A Planning Tool for Very Uncertain Times* (Santa Monica, Calif.: The RAND Corporation, 1993); David E. Thaler, *Strategies to Tasks: A Framework for Linking Means to Ends* (Santa Monica, Calif.: The RAND Corporation, 1993); and Ralph McNulty, *Applying the Future Now!* Project 2025 (Washington: Institute for National Strategic Studies, National Defense University, 1991).

[2] Some argue that scenarios assist planning efforts in times of uncertainty; see Schwartz, *The Art of the Long View*, and Dewar, *Assumption-Based Planning*. While scenarios can help the decisionmaker during uncertain times if properly used, their utility is greater when a set of specific underlying assumptions in times of greater certainty are agreed upon.

[3] See William J. Perry, "Desert Storm and Deterrence," *Foreign Affairs*, vol. 70, no. 4 (Fall 1991), pp. 68–73.

[4] This analysis was done by the Office of the Secretary of Defense (Program Analysis and Evaluation) in Autumn 1993 to support development of the mission-pull approach by OSD.

[5] Futurologists and social theorists with a proclivity for perfection are of limited value as few of them systematically examine potential operating environments. Fewer still go into future operational military missions or threat environments in detail. The extant literature is primarily suggestive about future operating environments and consequently was used only to establish the glossary of potential operating environments.

[6] Critical tasks, as defined by mission-pull, are analogous to *operational objectives* as found in the RAND *strategies-to-tasks* planning methodology. See Glenn Kent and William Simons, "Objective-Based Planning," in Paul K. Davis, editor, *New Challenges for Defense Planning: Rethinking How Much Is Enough* (Santa Monica, Calif.:, The RAND Corporation, 1994), pp. 59–72, and Thaler, *Strategies to Tasks*.

[7] Mission grids were developed by the Institute for Defense Analysis.

[8] The relationship between *mission-pull* and *technology-push* in developing capabilities is complex. But limited resources and uncertainty over a threat means mission-pull should dominate in the next 15–20 years. Beyond that, technology-push will likely become increasingly important.

[9] For example, see Carl H. Builder, "Roles and Missions: Back to the Future," in *Joint Force Quarterly*, no. 4 (Spring 1994); and Daniel T. Kuehl and Charles E. Miller, "Roles, Missions, and Functions: Terms of Debate," in *Joint Force Quarterly*, no. 5 (Summer 1994).

[10] Of them, the work of the Joint Requirements Oversight Council (1994) includes nine functional areas: strike, ground maneuver, strategic mobility and its protection, air superiority, counterproliferation of WMD, command and control and information warfare, intelligence-surveillance-reconnaissance, overseas presence, and joint readiness; the CJCS review (1989) also cited nine functional areas: land warfare, air warfare, maritime warfare, littoral warfare, homeland defense, strategic nuclear warfare, space warfare, strategic transportation, and special operations.